

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A wireless network system, comprising
  - a plurality of access elements for wireless communication with one or more remote client elements and for communication with a central control element;
  - a central control element for supervising said access elements, wherein the central control element is operative to manage and control the wireless connections between the access elements and corresponding remote client elements,
  - wherein the central control element is further operative to
    - detect a session initiation message associated with a first remote client element, the session initiation message corresponding to an application layer session a session between the first remote client element and an end system,
    - process the session initiation message to determine one or more Quality-of-Service (QoS) parameters, wherein one of the one or more QoS parameters is an allocation of wireless bandwidth resources of an access element;
    - associate the one or more QoS parameters to the application layer session corresponding to the session initiation message, and
    - forward the session initiation message to a session initiation protocol server for processing of the session initiation message;
    - transmit the one or more QoS parameters to a first access element to which the first remote client element is associated, and
    - wherein the first access element is operative to
      - maintain wireless connections with one or more remote client elements;
      - reserve wireless bandwidth of the first access element for the application layer session according to the allocation of wireless bandwidth of the QoS parameter

transmitted by the central control element.

2. (original) The system of claim 1 further comprising a computer network, wherein the central control element is coupled to the computer network, and wherein the central control element is operative to

establish a tunnel with each access element for transmission of wireless traffic associated with corresponding remote client elements, and

bridge network traffic between the computer network and a remote client element through a tunnel with a corresponding access element.

3. (original) The system of claim 2 wherein the access elements are each connected to the central control element via a direct access line.

4. (original) The system of claim 2 wherein the access elements are each operably coupled to the computer network.

5. (previously amended) The system of claim 1 wherein the central control element, in response to the handoff of the remote client element from the first access element to a second access element, is further operative to transmit the QoS parameter defining the allocation of wireless bandwidth to the second access element.

6. (previously amended) The system of claim 1 wherein the central control element is further operative to revoke previously granted QoS guarantees provided to at least one lower priority session, if enforcement of the QoS parameter defining the allocation of wireless bandwidth with all previously configured QoS parameters exceeds a limit.

7. (original) The system of claim 6 wherein the limit is the maximum bandwidth associated with the access element.

8. (original) The system of claim 6 wherein the limit is a configurable maximum bandwidth limit.
9. (original) The system of claim 6 wherein the limit is a maximum number of sessions.
10. (previously amended) The system of claim 1 further comprising a session initiation protocol (SIP) server including an application layer authentication mechanism; and wherein the central control element is operative to maintain security states for remote client elements detected by the access elements, apply, at the access elements, a security mechanism to control access to the wireless connections to remote client elements, wherein operation of the security mechanism is based on the security states of the remote client elements, and adjust the security state associated with a remote client element based on its interaction with the authentication mechanism associated with the SIP server.
11. (original) The system of claim 10 wherein the central control element is operative to deny connections with an access element to a wireless client element that fails to properly authenticate with the authentication mechanism of the SIP server.
12. (currently amended) A method for dynamically configuring a QoS mechanism for wireless sessions, comprising receiving, at a wireless network access device, a session initiation message associated with a wireless client remote from the wireless network access device, the session initiation message corresponding to an application layer session a-session between the wireless client and an end system; transparently processing the session initiation message to determine a Quality-of-

Service (QoS) parameter, wherein the QoS defines an allocation of wireless bandwidth resources provided by the wireless network access device,

associating the QoS parameter to the session corresponding to the session initiation message,

forwarding the session initiation message to a session initiation protocol server for processing; and

enforcing, at the wireless network access device, the QoS parameter on data flows associated with the application layer session by reserving wireless bandwidth for the application layer session according to the allocation of wireless bandwidth resources.

13. (currently amended) The method of claim 12 further comprising

monitoring for a response to the session initiation message forwarded to the session initiation protocol server; and

deallocating the wireless bandwidth reserved for the application layer session, if the response rejects the application layer session.

14. (currently amended) The method of claim 12 further comprising

storing, responsive to detection of the session initiation message, the session initiation message forwarded to the session initiation protocol server;

monitoring for a response accepting the application layer session corresponding to the session initiation message forwarded to the session initiation protocol server;

and wherein the enforcing the QoS parameter is conditioned on the response accepting the session initiation message.

15. (currently amended) The system of claim 1 wherein the central control element is operative to

monitor for a response to the session initiation message forwarded to the session initiation protocol server;

transmit, if the response rejects the application layer session corresponding to the session initiation message, control signals to cause the first access element to discard the QoS parameters transmitted by the central control element in response to the session initiation message.

16. (currently amended) The system of claim 1 wherein the central control element is operative to

store, responsive to detection of the session initiation message, the session initiation message forwarded to the session initiation protocol server;

monitor for a response accepting the application layer session corresponding to the session initiation message forwarded to the session initiation protocol server;

and wherein transmission of the one or more QoS parameters to the first access element is conditioned on the response accepting the session initiation message.